4280-B APPENDIX A ENERGY EFFICIENCY

TECHNICAL REPORTS FOR PROJECTS WITH TOTAL ELIGIBLE PROJECT COSTS OF $200,000 OR LESS

The Technical Report for projects with total eligible project costs of $200,000 or less must demonstrate that the project design, procurement, installation, startup, operation, and maintenance of the renewable energy system or energy efficiency improvement will operate or perform as specified over its design life in a reliable and a cost-effective manner. The Technical Report must also identify all necessary project agreements, demonstrate that those agreements will be in place, and that necessary project equipment and services are available over the design life.

All technical information provided must follow the format specified in Sections 1 through 10 of this appendix. Supporting information may be submitted in other formats. Design drawings and process flowcharts are encouraged as exhibits. A discussion of each topic is not necessary if the topic is not applicable to the specific project. Questions identified in the Agency's technical review of the project must be answered to the Agency's satisfaction before the application will be approved. The applicant must submit the original technical report plus one copy to the Rural Development State Office. Depending on the level of engineering required for the specific project or if necessary to ensure public safety, the services of a licensed professional engineer or a team of licensed professional engineers may be required.

Section 10. Energy Efficiency Improvements

The technical requirements specified in this section apply to energy efficiency improvement projects, which are, as defined in § 4280.103, improvements to a facility, building, or process that reduces energy consumption.

(a) Qualifications of key project service providers. List all key project service providers. If one or more licensed professionals are involved in the project, provide the credentials for each professional. For projects with total eligible project costs greater than $50,000, also discuss the qualifications of the energy auditor, including any relevant certifications by recognized organizations or bodies.

(b) Agreements, permits, and certifications.

(1) The applicant must certify that they will comply with all necessary agreements and permits required for the project. Indicate the status and schedule for securing those agreements and permits.

(2) Identify all environmental issues, including any compliance issues associated with or expected as a result of the project on Form RD 1940-20, "Request for Environmental Information," and in compliance with 7 CFR part 1940, subpart G, of this title.

(c) Energy assessment.

(1) For all energy efficiency improvement projects, provide adequate and appropriate evidence of energy savings expected when the system is operated as designed.

(2) For energy efficiency improvement projects with total eligible project costs greater than $50,000, an energy audit must be conducted. An energy audit is a written report by an independent, qualified party that documents current energy usage, recommended potential improvements and their costs, energy savings from these improvements, dollars saved per year, and simple payback period in years (total costs divided by annual dollars of energy savings). The methodology of the energy audit must meet professional and industry standards. The energy audit must cover the following:

(i) Situation report. Provide a narrative description of the facility or process, its energy system(s) and usage, and activity profile. Also include price per unit of energy (electricity, natural gas, propane, fuel oil, renewable energy, etc.,) paid by the customer on the date of the audit. Any energy conversion should be based on use rather than source.

(ii) Potential improvements. List specific information on all potential energy-saving opportunities and their costs.

(iii) Technical analysis. Discuss the interactions among the potential improvements and other energy systems.

(A) Estimate the annual energy and energy costs savings expected from each improvement identified in the potential project.

(B) Calculate all direct and attendant indirect costs of each improvement.

(C) Rank potential improvement measures by cost-effectiveness.

(iv) Potential improvement description. Provide a narrative summary of the potential improvement and its ability to provide needed benefits, including a discussion of nonenergy benefits such as project reliability and durability.

(A) Provide preliminary specifications for critical components.

(B) Provide preliminary drawings of project layout, including any related structural changes.

(C) Document baseline data compared to projected consumption, together with any explanatory notes. When appropriate, show before-and-after data in terms of consumption per unit of production, time or area. Include at least 1 year's bills for those energy sources/fuel types affected by this project. Also submit utility rate schedules, if appropriate.

(D) Identify significant changes in future related operations and maintenance costs.

(E) Describe explicitly how outcomes will be measured.

(d) Design and engineering. The applicant must submit a statement certifying that their project will be designed and engineered so as to meet the intended purpose, will ensure public safety, and will comply with applicable laws, regulations, agreements, permits, codes, and standards.

(1) Identify possible suppliers and models of major pieces of equipment.

(2) Describe the components, materials, or systems to be installed. Include the location of the project.

(e) Project development schedule. Provide a project schedule in an appropriate level of detail that will demonstrate the project can be adequately managed. The applicant must submit a statement certifying that the project will be completed within 2 years from the date of approval.

(f) Project economic assessment. For projects with total eligible project costs greater than $50,000, provide an analysis of the proposed project to demonstrate its financial performance, including the calculation of simple payback. The analysis should include applicable investment incentives, productivity incentives, loans and grants, and expected energy offsets or sales on a monthly and annual basis. In addition, provide other information necessary to assess the project’s cost effectiveness.

(g) Equipment procurement. Include a statement from the applicant certifying that “open and free” competition will be used for the procurement of project components in a manner consistent with the requirements of 7 CFR part 3015 of this title.

(h) Equipment installation. The project must be installed in accordance with applicable local, State, and national building and electrical codes and regulations. Include a statement from the applicant certifying that equipment installation will be made in accordance with all applicable safety and work rules. Upon successful system installation and following established operation, the successful applicant must deliver invoices and evidence of payment.

(i) Operations and maintenance. Identify any unique operations and maintenance requirements of the project necessary for the improvement(s) to perform as designed over the design life. State the design life of the improvement(s). Provide information regarding component warranties.

(j) Dismantling and disposal of project components. Describe a plan for dismantling and proper disposal of the project components and associated wastes at the end of their useful lives.